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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,733	10/22/2003	Daisaku Okuwaki	OKUWAKI1	3996
1444	7590	06/09/2005	EXAMINER	
BROWDY AND NEIMARK, P.L.L.C. 624 NINTH STREET, NW SUITE 300 WASHINGTON, DC 20001-5303			LEE, GUNYOUNG T	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/689,733

Applicant(s)

OKUWAKI ET AL.

Examiner

Gunyoung T. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/22/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "1b" in Fig. 1 (a) and (b), Fig. 3(a), and Fig 4. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "2b" in Fig. 4 has been used to designate both a chamfered portion and a bottom surface of a light guide plate (2). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if

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only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4/1, 5/1, 4/2 and 5/2 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (US PUB 2001/0036068).

5. Suzuki et al. show a back light unit having:

- A light guide plate (Fig. 2, 11) made of a platelike, light-transmitting material formed;
- With a light emitting surface (11b) on a top side thereof and a reflection surface (11c) on a bottom side thereof;
- An illuminating light source (2) arranged opposite a light receiving side surface (11a) of the light guide plate (11);
- Wherein light coming from the illuminating light source (2) into the light receiving side surface (11a) of the light guide plate (11);

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- Wherein chamfered or curved portions (Fig. 6, and p. 2, paragraph 24, lines 1-11 and p. 5, paragraph 66, lines 3-12) are provided at the upper and lower ends (Fig. 2, E) of the light receiving side surface (11a) where the light receiving side surface (11a) and the light emitting surface (11b) of the light guide plate intersect;
- A prism sheet (Fig. 3a, and p. 4, paragraph 60, lines 1-7) for restricting a light transmission direction is arranged opposite the light emitting surface (Fig. 2, 11b) of the light guide plate (11).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 3, 4/3, 5/3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US PUB 2001/0036068).

9. Suzuki et al. was discussed in rejection of claims 1, 2, 4/1, 5/1, 4/2 and 5/2 above. Suzuki et al. show the invention substantially as claimed except for a chamfered portion provided either at an upper end of the light receiving side surface where the light receiving side surface and the light emitting surface of the light guide plate intersect or at a lower end of the light receiving side surface where the light receiving side surface and the reflection surface of the light guide plate intersect, and a curved portion provided at the other end.

10. In regards to the chamfered portion either at the upper or lower ends of the light receiving side surface, and a curved portion at the other end, Suzuki et al. teach that an edge portion located between the light receiving side surface and a surface adjacent to the light receiving side surface can be machined to have either a radius with a curvature or a chamfer with dimensions (p. 3, paragraph 34, lines 10-19). Suzuki et al. also teach that the edge portions (Fig. 2, E) located between the light receiving side surface and a surface adjacent to the light receiving side surface need not to have the same dimensions (p.2, paragraph 25, lines 1-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a light guide plate with different (curved and chamfered) shapes of edge portions between the light receiving side surface and a surface adjacent to the light receiving side surface to achieve a high quality back light by reducing the occurrence of the bright light lines.

11. Claims 6/1, 7/1, 6/2, 7/2, 6/3 and 7/3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US PUB 2001/0036068) as applied to claims 1-3, 4/1, 5/1, 4/2, 5/2, 4/3 and 5/3 above, and further in view of Taira et al. (US 5,712,694).

12. Suzuki et al. show the invention substantially as claimed except for a reflection surface of the light guide plate formed of a plurality of prisms.

13. In regards to the reflection surface formed of a plurality of prisms, Taira et al. disclose a light-guiding plate having a reflection surface formed of a plurality of prisms (Fig. 20, 1509). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the light-guiding plate with a prism reflection surface as shown in Taira et al. for the back light unit of Suzuki et al. to improve the brightness of the back light uniformly.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Suzuki et al. (US 6,572,236) show a back light unit having a light guide plate (Fig. 2, 11) with the chamfered or curved edge portions (Fig. 2, E and col. 3, lines 56-62) located between the light receiving side surface (11a) and a surface adjacent (11b or 11c) to the light receiving side surface. Ha (US 6,443,583) shows a backlight device having a light pipe with the curved edge portions located between the light receiving side surface (Fig. 2b, 2) and a surface adjacent to the light receiving side surface. Tai et al. (US 5,359,691) show a backlighting system having a back light pipe (Fig. 7A) with the chamfered edge portions (50A and 52A) located between the light

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receiving side surface and a surface adjacent (50 or 52) to the light receiving side surface. Koike et al. (US 5,659,410) show a surface light device having a light scattering guide (Fig. 6 and Fig. 10e) with the chamfered (Fig. 6, 6a) and curved (Fig. 10e, 6g) edge portion located between the light incident surface (2) and the bottom reflection surface (6b).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gunyoung T. Lee whose telephone number is (571) 272-8588. The examiner can normally be reached on 7:30 - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GTL  
6/6/2005



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